



Health Accounts System of Dubai **HASD**

First update: 2013-2014



FOREWORD

Allocating sufficient and sustainable funds for healthcare is a cornerstone of the success of any health system

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Under the leadership of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President of the UAE and Prime Minister and Ruler of Dubai significant, advancements have been made in all services and economic sectors. The general aim is to build a sustainable socio-economic environment that can respond to the healthcare needs of the Dubai population.

With the recent introduction of a Mandatory Health Insurance Law in 2013, Dubai's health sector landscape is already seeing an evolution. The regulatory role of the Dubai Health Authority requires that it act to ensure accessibility, quality and continuity in the provision of health services to residents of Dubai. The scheme that was launched to monitor and implement the Law is named as the Insurance System for Advancing Healthcare in Dubai, ISAHD.

Allocating sufficient and sustainable funds for healthcare is a cornerstone of the success of any health system

The Dubai Health Authority is pleased to publish the second account of health expenditures for the Emirate of Dubai. The information contained in this Health Accounts System of Dubai (HASD) 2015 Report will support decision-making through evidence-based insights and policy implications.

DHA is producing HASD on an annual basis, to support the advancement and growth of the healthcare sector of Dubai. Hereby,

DHA is producing its second report for the years 2013 and 2014. The results shown in this report come as a Timely Update, given that 2014 is the first year in the implementation of ISAHD.

Selection and implementation of the most recent methodologies has been important for decision-making regarding health sector policies in Dubai. In the interest of efficient planning and implementation, it is important to understand the financial elements and mechanisms of health expenditure, and to monitor changes over time. Efficient and effective use of financial resources will raise the standard and quality of health services. DHA's decision to produce HASD was based on two needs:

- To measure the financial dimensions of Dubai's healthcare system, allowing efficiency in allocating funds between the private and public health sectors.
- To monitor changes in the financial distribution between governmental and private health sectors, compared with regional and international countries. Monitoring changes that occur over time will give the government and investors the information needed to gauge investment size and trends.

In successfully completing this exercise DHA greatly appreciates the participation of all stakeholders for their contribution to ensuring the establishment of an efficient and dynamic healthcare system in Dubai. Special appreciation goes to the project team, who supervised the project and facilitated access by the technical team to data from numerous sources, and participated in the revision of this report.

I look forward to continued support from all stakeholders in producing the annual HASD Report. I also invite the stakeholders to utilize the information contained in this report to support their decisions on how to better deliver healthcare for residents of Dubai.

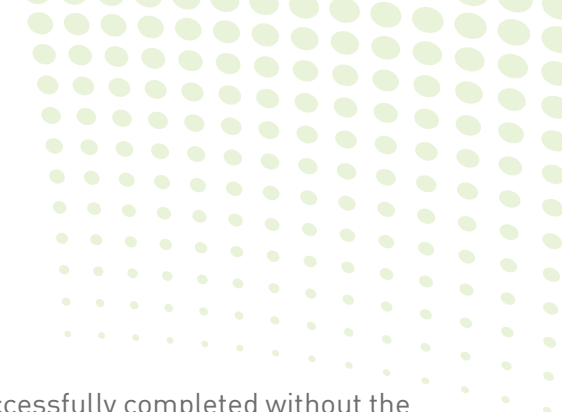
His Excellence Humaid Al Qatami

Chairman of the Board and Director General



ACKNOWLEDGEMENT

Significant efforts were undertaken to provide this comprehensive analysis of health expenditure and flow of funds throughout Dubai's healthcare system. Significant data on expenditure was collected, analyzed and validated to produce HASD Report: 2015. The Health Funding Department (HFD) in DHA worked in close collaboration with key stakeholders, in order to publish a transparent report. In particular,



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The technical team responsible for the execution of HASD and this report includes the following members:

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Participated in the administrative and production of this report

Golden sponsor



This exercise could not have been successfully completed without the support of several key stakeholders.

Sincere gratitude and appreciation is due for the cooperation of these stakeholders in providing the vital and sensitive financial information necessary to produce this report. In particular, the following organizations' collaborative efforts are recognized:

- Finance Department, Dubai Health Authority
- Ministry of Health, United Arab Emirates
- Department of Finance, Dubai
- Dubai private health sector: Hospitals, insurance companies, polyclinics, and pharmacies

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EXECUTIVE SUMMARY

First Health Accounts' follow up, a timely update since the Universal Health Coverage Law

12.77 B AED was spent on healthcare in 2014: 10.947 B AED in Dubai, 1.826 B AED outside Dubai

The yearly growth between 2012 and 2013 was 15%, or 1.52 B; and between 2013 and 2014 was 11%, or 1.32 B AED

8.46 B AED was spent in the private healthcare sector in 2014, with an increase of 37% from 2012

Share of funds between private and government was 70:30 in 2014

Finding from HASD 2013-2014 cannot infer direct causality between growth of total Current Health Expenditure (CHE) in 2014 and Insurance System of Advancing Healthcare in Dubai (ISAHD)



1.1 Need for HASD

- The need of health accounts in Dubai is paramount for reform involving implementation of the universal health coverage scheme, which was mandated by Law 11 of 2013, and entered in effect at the first quarter of 2014, with the goal of reaching Universal Coverage in mid-2016. Success of this reform requires reliable data collection and standard data analysis for establishing health financing policies.
- Health accounts offer reliability and standardization of data through international acceptance of its classification standards, which allows for comparison between Dubai and other health jurisdictions.
- Thus, the Health Accounts System of Dubai (HASD) provides a factual account of health expenditures by government and private sector, by health care functions, such as inpatient and outpatient, and by health care provider, such as hospitals and clinics.
- All of these dimensions can then be observed over time, at this important time for Dubai's UHC, where the information from 2012 and 2013 provide insights on the BEFORE period, and 2014 findings provide insights on the DURING period.

1.2 Data Collection & Analysis

- HASD methodology conforms to the international classification of System of Health Accounts (SHA) 2011 developed by WHO, OECD and EUROSTAT (the statistical office of the EU) in cooperation with health accounts experts around the globe. In addition, few assumptions were used to map Dubai healthcare system to SHA 2011.
- Primary and secondary datasets were received from
 - Government (Dubai Department of Finance (DoF), Dubai Health Authority (DHA), and the Ministry of Health (MoH)) – financial and utilization data.
 - Private sector –health insurance companies, providers and retailers, and major employers and corporations.
 - The electronic system of claims in Dubai, eClaimLink; a hub where providers submit claims to insurance companies and receive remittance advice from those companies.
 - The Dubai Household Health Survey (DHHS), where 4300 households were surveyed.
- The datasets were analyzed using the recently released Health Accounts Production Tool (HAPT), developed by USAID, the World Health Organization (WHO), and the World Bank.

1.3 HASD Key Insights & Implications

	Key Insights	Implications
1	<p>With ISAHD mandated coverage, what was achieved: more money for health, or more health for money?</p> <ul style="list-style-type: none"> The growth in Current Healthcare Expenditure in 2014 can not be directly attributed to ISAHD. More evidence over time is needed. 	<p>More money for health has been reported; an additional 1.32 B AED in 2014, as follows:</p> <ul style="list-style-type: none"> The growth of total current health expenditure (CHE) reached 8% in real terms. The growth was not uniform across sources, however: <ul style="list-style-type: none"> Prepayment at 12%, or 8% in real terms Households at 8%, or 4% in real terms Corporations, in terms of self insurance schemes, at 9%, or 5% in real terms Govennt at 16%, or 12% in real terms The growth was distributed among the following schemes: <ul style="list-style-type: none"> Prepayment schemes at 34%, or an additional 449 M AED Households at 17%, or 228 M AED Corporations at 10%, or 130 M AED Government at 39%, or 511 M AED
2	<p>How much was the growth in current healthcare expenditure?</p> <ul style="list-style-type: none"> The growth in Current Healthcare Expenditure was 1.32 B AED or 11.5% in 2014, which is translated to 8% in real terms. 	<p>More health for money has been recorded; an additional 1.32 B in 2014, as follows:</p> <ul style="list-style-type: none"> Inpatient care grew by 14%, or 10% in real terms Outpatient care grew by 8%, or 4% in real terms Drugs grew by 14%, or 10% in real terms Preventive dropped by 8%, or 12% in real terms Administration of health funding increased by 12%, or 8% in real terms
3	<p>Was the growth in Current Health Expenditure uniform across sources?</p> <ul style="list-style-type: none"> The growth was not uniform. Government had the highest growth at 16%. 	<p><i>What does this mean?</i></p> <p><i>The total growth of health funds was 8%, accounting for the inflation. Thus, more money for health (1.3 B AED). The growth is not uniform across services, with highest increase in curative care. Hence, more health for money, and reduction in preventive care.</i></p>

	Key Insights	Implications
4	<p>Where did the health funds come from? (Sources of funds) The total current expenditure on health of 12.77 B AED was funded as follows:</p> <ul style="list-style-type: none"> ● Government 33% ● Employers and corporations 42%, of which 33% of the total expenditure as prepayments ● Households 25% 	<p>The small share of prepayment amounts, obtained through the siloed healthcare financing model, is not sustainable. The MHI Law provides DHA with the mandate to implement universal health coverage that includes substantial prepayments amounts. The prepayments will allow a bridged model (diversity in sources and management of health funds), which leads to the sustainability of the system based on access and quality.</p> <p><i>What does this mean?</i></p>
5	<p>Which institutions managed the health funds?</p> <ul style="list-style-type: none"> ● The management of funds in Dubai showed a silo flow, where providers of funds managed their own budgets. ● Households 25% 	<p><i>When various health financial sources pool money into a common collection it reduces individual risk and increases efficient redistribution as per patients needs</i></p>
6	<p>Where healthcare funding went (which providers)?</p> <ul style="list-style-type: none"> ● Hospitals received 47%, a percentage that is higher by the international comparison, but not so high when compared to regional measures. ● Clinics and polyclinics received 22%. ● Pharmacy retailers received 9%, and ancillary 2%. ● Services provided outside Dubai (imported) accounted for 14%. 	<p>Half of the money for healthcare was paid for services delivered at hospitals. The government share of hospital services was even higher: 53%. Hospitals in Dubai received the highest share of healthcare funds among all OECD benchmark countries, an average of 36%. ISAH is based on a primary care model. Robust administrative and clinical policies must be established to ensure efficient utilization of primary care facilities are to reduce the burden on hospitals.</p> <p><i>What does this mean?</i></p>
7	<p>What services were purchased by the health funds?</p> <ul style="list-style-type: none"> ● Curative care received 59%. ● Preventive care received 5%, and was mainly funded by the government. Of the government funds, 12% was spent on preventive care. However, it accounted for only 4% of insurance claims and OOP. Of these services all most all were provided in ambulatory settings. ● Drugs and other medical goods received 14% ● Services provided outside Dubai (imported) accounted for 14%. 	<p><i>A more balanced distribution of where money is spent (hospitals or primary care) will ensure better value for money spent on services</i></p> <p>Since much of the population in Dubai is transient, health insurance companies may be reluctant to invest in preventive programs designed to reduce future costs. The government should continue to design preventive care strategies and together with the private sector ensure implementation, through mandated programs and interventions.</p> <p><i>What does this mean?</i></p> <p><i>Employers and health insurance companies should be guided, trained and communicated on preventive care.</i></p>



INTRODUCTION

Dubai's dynamic and industrious economy has developed during the last 40 years through trade, industrialization, real estate development, hospitality, promoting investment and tourism. Dubai's GDP per capita was \$27,742 in 2014, with new initiatives on Green Economy and investments in health, education and research & development.

2.1 Background

The success of Dubai's economy is attributed to trade and investment rather than hydrocarbon reserves (DSC, The Business Year, 2014). In order to promote a competitive business environment, Dubai has established more than 20 free zones, including the Dubai International Financial Center, Dubai Healthcare City, Knowledge Village, Internet City and Media City (Dubai Department of Economic Development).

A tax-free system has helped to make it an international hub that is popular with visitors and investors from the eastern and western hemispheres. Dubai continues to grow as a tourist destination and its mark on the world map was emphasized in 2010 when it inaugurated the world's tallest building, Burj Khalifa. Further developments and plans include the extension of the metro system, and construction of Dubai World Central and Mohammad bin Rashid City.

Most recently, Dubai has won the bid of hosting the World Exposition 2020, with the core vision of "connecting minds, creating the future". Dubai's health sector is currently undergoing a significant reformation that will change the landscape of healthcare and how it is used. In November 2013, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice-president and Prime Minister of UAE and Ruler of Dubai, passed the Health Insurance Law of Dubai, 2013, which states that all residents and visitors to Dubai must be warranted a minimum of basic healthcare coverage. The implementation is scheduled to take effect across Dubai in stages, with universal coverage reached by 2016. Dubai's Universal Health Coverage (UHC) is based on mandatory enrollment through employment, which will remove the burden of financial considerations for the patient. This model ensures that patients have access to healthcare within a financially sustainable health sector, and that patients will have the choice of seeking treatment with government and/or private healthcare providers. As a result, providers are incentivized on quality of services as a derivative of UHC.

Currently, the health sector is comprised of government, private and Dubai Healthcare City (DHCC) organizations, including 26 private hospitals, 2 Ministry of Health (MOH) facilities and 4 DHA hospitals with a capacity of 3,816 beds, over 5,000 doctors in most specialties, and 1,075 public and private outpatient clinics (DHA Annual Statistical Report 2014).

DHA and private healthcare providers are regulated and licensed as per international standards of practice by DHA, and are expected to be aligned to the overall health sector strategy of providing affordable and accessible care.

In keeping with the demands of a growing population and its respective health needs, DHA will expand its facilities, with plans to increase access and affordability of services through the expansion of Rashid Hospital & Trauma Center, building new hospitals and establishing the Al Maktoum Trauma Center (Dubai Health Strategy 2013-2025).

Healthcare providers who operate in DHCC work under the regulatory authority of that body, through a memorandum of understanding with DHA. The 23 private hospitals range from small specialty short-stay centers to larger comprehensive facilities. These facilities provide care to patients who pay privately for accommodations that range from basic to luxurious.

2.2 HASD 2012

A key issue to address initially was the definition of health boundaries. In particular, SHA is usually performed at the national level rather than the state level. However, the following reasons supported the decision to conduct SHA only for Dubai:

- There is no Health Accounts at the national level in UAE.
- Dubai has initiated substantial reform in healthcare financing by shifting from scattered health financing schemes to a universal

healthcare coverage scheme based on equitable contribution from all participants. Implementation of this reform requires reliable data collection and standard data analysis. NHA offers both the reliability and standardization of data. In addition, NHA has been used internationally to inform policy making during transition to universal health coverage. Regional countries along with WHO and WB highlighted that

“I regard universal health coverage as the single most powerful concept that public health has to offer. It is inclusive. It unifies services and delivers them in a comprehensive and integrated way, based on primary health care.” Dr Margaret Chan, WHO Director-General

- Dubai has a unique institutional and economic setup. It has all the autonomous entities that are necessary for existence as a country, but is also a member city of the UAE. It has developed an economic model that has supported its rise as a major cosmopolitan city.

2.3 HASD 2013 - 2014 Report Methodology

Overall, HASD methodology followed the international classification of SHA 2011, which was also followed in HASD 2012. In addition to these classifications, additional administrative and technical steps were taken in order to accurately map the healthcare system in Dubai. In particular, the HASD technical team needed to address two main issues: the rationale for producing NHA at a state level, and the

definition of population boundaries. Addressing the rationale was agreed and established in HASD 2012.

Population boundaries for HASD

Once the decision was made to produce health accounts for Dubai, the second technical issue to address was the population boundaries. This section highlights the assumptions and rationale used for HASD population.

The population in Dubai is classified into the following four groups:

- Nationals
- Non-Nationals with employment visas from Dubai and residence inside Dubai
- Non-Nationals with employment visas from Dubai but residence outside Dubai (mainly Sharjah)
- Tourists who visit Dubai. These constitute a significant factor in Dubai's economy

The two last groups are not considered as part of Dubai's population in the official figures from DSC. However, the health financing reform is aimed to offer UHC to all members of the first three groups, regardless of their geographical location. Government agencies and private employers are mandated to offer healthcare coverage to all employees (Law Number 11, 2013).

Thus, the population boundaries for HASD are those that the health financing reforms are designed to serve. Specifically, all Dubai residents (National and non-Nationals), regardless of their geographical location are included in the production of HASD.

- DSC estimated the population of permanent residents in Dubai at 2.3 million in 2014.
- An additional 1.08 million are workers in the Emirate, and reside outside the Emirate.
- The gender breakdown of these residents is approximately 69% male and 31% female.
- The majority of male expatriate residents are blue-collar workers of Asian, South Asian or African origin, employed mainly in the infrastructure, services, and transport sectors.
- Working-age males comprise the majority of the population of Dubai, with only 15% under the age of 15 years and 2% over 60 years of age (Population Bulletin 2014, Dubai Statistics Center).
- The estimates of the first three groups – who constitute HASD boundaries – are at 3.3 million with a gender breakdown that is similar to the DSC's figures.

From 2000 to 2010, the population in Dubai increased by 121% compared to an average global increase of 13%. Adjusting the population in Dubai is instrumental for determining per capita health needs. Adjustment of population ensures that the comparisons of per capita health measure with other countries account for the unique composition of the populations in Dubai. The population of Dubai was adjusted using regression models to predict the adjusted population for each age group of males. More information on population adjustment can be found elsewhere, in Hussin, 2014.

2.3 Data Sources and Assumptions

The data for HASD were collected and analyzed in accordance with international guidelines provided in SHA 2011. In conjunction with the HASD Methodology section above, this section lists the data sources used, and the assumptions followed. The following two data sets were used for the first time, and are therefore different sources than those used in 2012. Therefore, trend analysis between the previous and

current report should be made noting the difference in data collection methods and sources. As the population of Dubai participates in Universal Health Coverage, the data structure and sources will become more accurate and analogous.

The two new sources of data that the HASD team used for 2013 and 2014 are EClaimLink & Dubai Household Health Survey, 2014

2.4 eClaimLink Data

The administrative data for private health insurance in 2014 was extracted from eClaimLink. The datasets from eClaimLink included both a) the membership data for all Dubai-based policies, and b) the claim transactions data. The membership data contains information such as gender and age, as well as other enrollment information (start date, end date, etc.). The claims transaction data contained the details of the services provided including information on treatment and diagnosis, and detailed financial information per activity. The services received by the members were then classified and mapped to SHA 2011.

Dubai Health Authority (DHA) oversees all operations relating to the eClaimLink system, and ensures adherence to rules and regulations for full compliance and that all health insurance transactions are reported through the system. For 2013, we used triangulation of data from three sources. First, we collected the data from the main health insurance companies, which represent 85% of the market in Dubai. The data from the insurance companies was not detailed enough by provider (HP) and by function (HC). Second, we applied detailed data from 2014 sorted by provider (HP) and by function (HC) to the data collected from the health insurance companies. Third, we cross-checked these results with the data collected from the health care providers in Dubai to ensure consistency.

2.5 The Dubai Household Health Survey (DHHS) 2014

The Dubai Household Health Survey (DHHS) is the largest and most comprehensive survey of health and healthcare issues ever carried out in the Emirate of Dubai. The survey, which was conducted in 2009 and then repeated again in 2014, provides a statistically accurate and representative picture of key health and healthcare variables across the entire population of Dubai, by nationalities, ages and income groups. The survey is based on a multi-stage stratified cluster sample and included a representative sample of 5,000 and 4,300 households across the Emirate of Dubai in 2009 and 2014, respectively. Surveyors visited these randomly selected households personally to obtain detailed information on issues ranging from household health expenditure and access to health services to questions on exercise levels, dietary habits, lifestyle diseases, use of medicines, injuries, mental health and physical capabilities, and a detailed module on people's use of and satisfaction with public and private health services in the Emirate. The 2014 survey, of which data is used in this HASD report had a response rate of 80 percent. The Survey was designed and led collaboratively by Dubai Statistics Center. The design and methodology of the survey were adapted from those used in the World Bank's Living Standards Measurement Surveys (LSMS), the World Health Organization's World Health Surveys (WHS) and the US Centers for Disease Control's National Health Interview and Examination Surveys (NHIES).

As explained above, the HASD population is classified into the following three groups:

- Nationals
- Non-Nationals with employment visas from Dubai and residence inside Dubai
- Non-Nationals with employment visas from Dubai but residence outside Dubai (mainly Sharjah)

The weights used in the survey are applied to the first two groups of HASD's population. The HASD team created an additional weight to capture the breakdown of health expenditure for the third HASD population.

In addition, the data from DHA and eClaimLink was triangulated into the survey data to ensure that the distributions by function (HC) and provider (HP) are captured into the survey data.

Aside from these two new sources of datasets, HASD's team used the same data sets obtained for HASD 2012. These sources are:

2.6 Government

Dubai Department of Finance (DoF)

DoF provided HASD's technical team with data for health expenditures paid by Dubai government to three recipients: Dubai Municipality, Dubai Police, and Dubai Ambulance. The data received included a detailed breakdown of expenditures and revenues based on the Dubai Government Chart of Accounts. The Chart of Accounts included the Cost Center and the item details of the recipient organizations. This breakdown was useful to accurately map the expenditures at the item level, and to ensure consistency with reports from the recipients of the funds.

DHA

Three datasets were used to analyze and map DHA's activities to HASD:

A. Detailed government expenditure data for the Cost Centers by item definition, and by sector (hospitals, PHC, administration, etc.). The breakdown was similar to that of DoF, and further allowed for consistency across all of the government providers. For the expenditure per healthcare functions, the data codes of clinical specialty were split into outpatient, inpatient and daycare. The preventive care expenditure was mapped and calculated based on the data for Cost Centers, such as Health promotion and preventive medicine section, Infection Control Section and Community Health Service Program Section.

Medical Fitness expenditure was allocated based on the age group of the expatriates' population distribution from age group 20 and above.

B. The revenue data collected by DHA from the patients, which contains the amount collected by each cost center. This data was also used in the triangulation of the Out-of-Pocket (OOP) expenditure.

C. The administrative data that contains the utilization, time spent by doctor per inpatient by specialty, and time taken for outpatient consultation according to specialty. The administrative data was used to map the expenditures by function including Overseas Treatment.

Ministry of Health

The HASD team also received detailed data from the Ministry of Health (MoH) of the expenditures and revenue data contain a breakdown by hospital and by health center located in Dubai. To account for the share of the health governance by MoH in Dubai, the national data was split based on the utilization data of MOH facilities in Dubai, with the assumption that 15% of the total IP and OP visits were conducted in Dubai.

2.7 Private health care institutions

Secondary datasets were collected from the following private providers:

- Hospitals
- Major polyclinics
- Pharmaceutical companies

The data from these providers are used in the triangulation process, provided valuable information on the OOP estimation as well as direct contracts with major employers.

2.8 Major employers

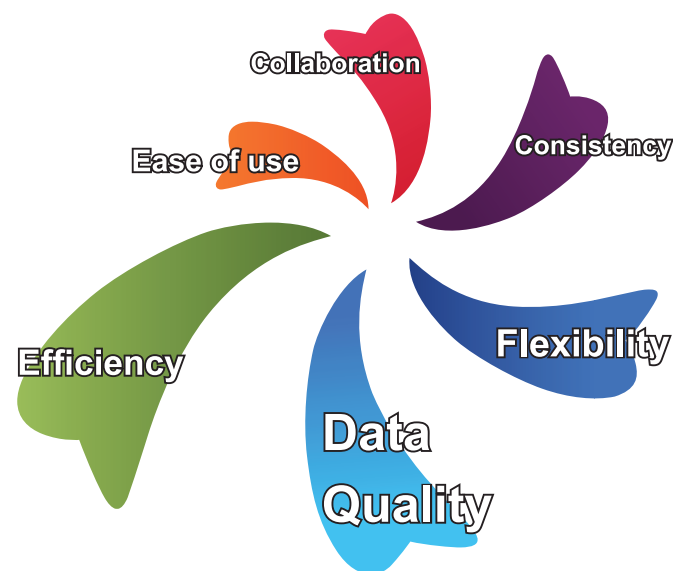
Private employers provide health coverage to their employees either by purchasing private health insurance, providing direct contracts with the private health providers, or reimbursing their employees for services received. The data from the major self-insured employers was collected.

2.9 Health Accounts Production Tool

The data collected was analyzed and tabulated using the HA Production Tool (HAPT), Version 3.5.1.1. NHAPT was developed by the Health Systems 20/20, with inputs and support from key NHA stakeholders including the WHO and the World Bank. NHAPT was developed to streamline and simplify the estimation process, thereby insuring a standard production of NHA to monitor and improve health system performance. The tool achieves these goals through a series of features designed around the themes of data quality, efficiency, ease of use, collaboration, consistency and flexibility. HAPT User Guide, page 1. NHA Production Tool User Guide: Version 3.5.1.1. June March 2012. Bethesda, MD: Health Systems 20/20, Abt Associates Inc.

Figure 1 SHA 2011 Health Accounts Production Tool

NHA Production Tool Themes and Features



2.10 Limitations

As expected in producing any NHA, HASD had some limitations, despite the comprehensive and detailed datasets collected to estimate 2013 and 2014 data and the use of NHAPT. First, the triangulation of data should be completed for the future HASDs. Efforts should be made to improve the data source and data standards. In particular, administrative data should be collected from the providers.

This data does not include the treatment outside Dubai. However, most of these cases are cosmetics treatments, which are not part of health as per SHA 2011. The cases that require medical treatment, based on SHA definitions, are mostly paid by the government or private health insurance. Expenditures on these cases are included in the administrative data received.

These two limitations were minimized for the 2013 and 2014 data, with the collection of the insurance-based transactions using eClaims. In addition, DHA collaborated with DCS to conduct and produce the data for the Household Utilization and Expenditures Survey (2014). Improvements in the data collection will support accurate allocation of health funds and minimize unnecessary expenditures.



FINDINGS & ANALYSIS

The Dubai Health Sector Strategy 2011-2013 mentioned a goal of 70/30 ratio between the private and public providers. The actual financial ratio in 2014 was 70/30.

3.1 Main Findings – Aggregated Level

The healthcare expenditure in Dubai experienced a steady increase between 2012 and 2014. Total Current Health Expenditure (CHE) in

2013 increased from the previous year by 16% (9.93 B to 11.46 B AED), and by 11% in 2014 (11.46 B to 12.77 B AED). The actual increase in health expenditure, once adjust for the annual inflation rates, was **14.7%** for 2013, and **7.6%** in 2014. However, the increase varied across sources.

Health Accounts Summary Indicators

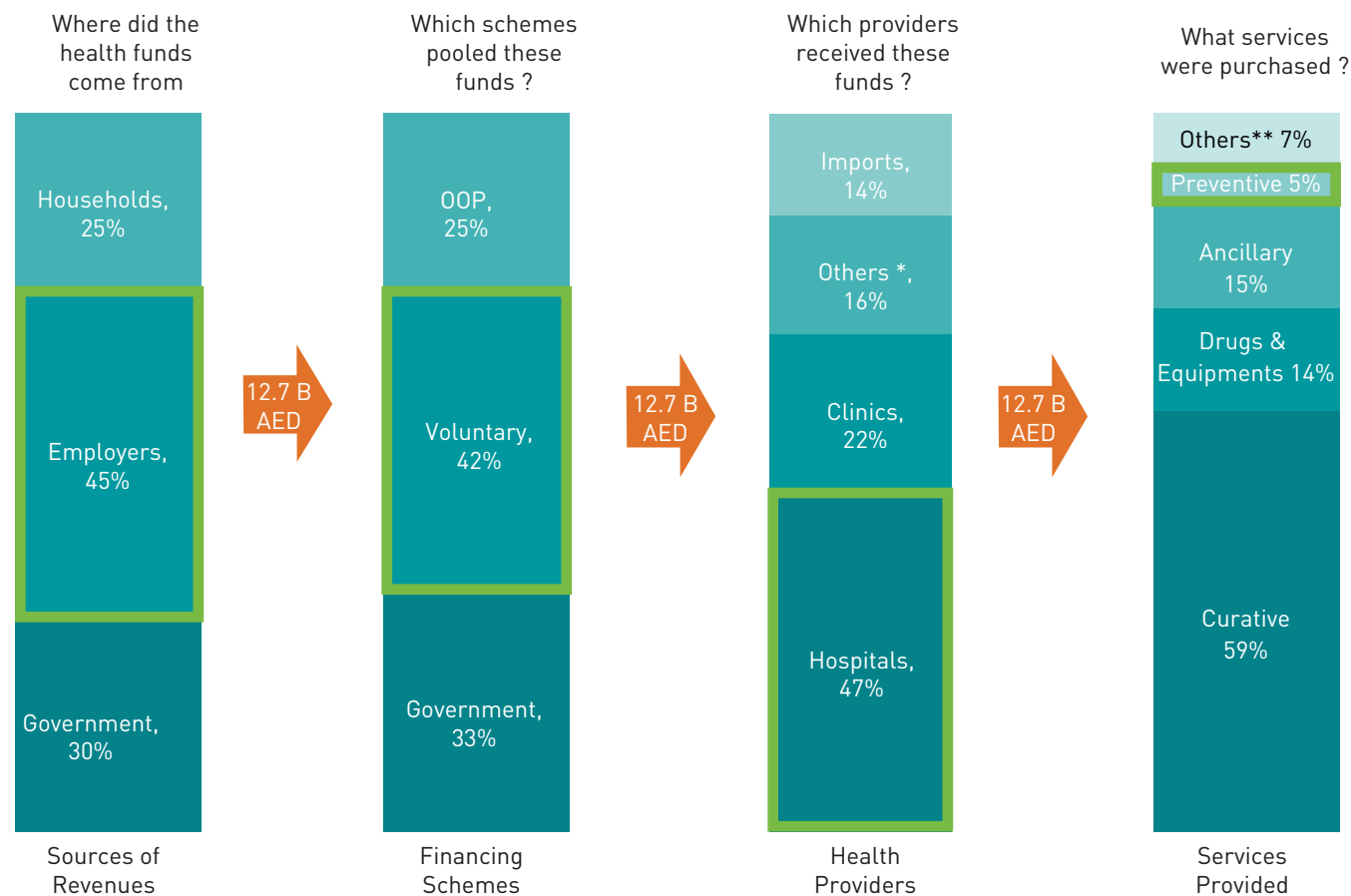
Table 1 HASD's summary indicators

	Indicators	Dubai	
		HASD Population	Risk adjusted Population*
1.	Health expenditure (HE) % Gross Domestic Product (GDP)		3.6%
2.	General Government Expenditure on Health (GGHE) as % of GDP		1.1 %
3.	General Government Expenditure on Health (GGHE) as % of HE		30%
4.	Private Expenditure on Health (PvHE) as % of HE		70%
5.	Out-Of-Pocket expenditure as % of PvHE		35%
6.	Out-Of-Pocket expenditure as % of HE		25%
7.	Private Insurance as % of PvHE		47%
8.	Expenditure on Inpatient care as % of HE		27%
9.	Government Expenditure on Inpatient care as % of GGHE		46%
10.	Prevention and Public Health services as % of HE		4.6%
11.	Medical goods as % of HE (not including IP)		14%
12.	Current expenditure on health / capita at exchange rate (NCU per US\$)	911	1,598
13.	Current expenditure on health / capita at Purchasing Power Parity (NCU per US\$)	903	1,585
14.	General government expenditure on health / cap x-rate	272	477
15.	General government expenditure on health / cap Purchasing Power Parity (NCU per US\$)	270	474
16.	OOPS / capita at exchange rate (NCU per US\$)	225	395
17.	Exchange Rate (NCU per US\$)		3.67
18.	PPP 2012 (NCU per US\$)		3.7
19.	Gross domestic product - Price index (2006=100) Million AED		352,186
20.	Population	3,821,075	2,178,013

*Source Hussin AH. Adjustment factors to per capita health-care indicators in countries with expatriate male-majority populations. Eastern Mediterranean Health Journal. 2014 Vol. 20 No.11. 690-697.

Figure 2 shows the flow of healthcare funds from source to schemes to providers and to services. Similar to findings in 2012, the management of funds in 2014 still maintains a silo flow, where providers of funds are managing their own budget. The hospitals received about half of the pooled health care funds, 47%. The healthcare expenditure outside Dubai is still at 14%. The majority of healthcare expenditures is on curative care, 59%. The expenditure on preventive care remains low at 5%.

Figure 2 Flow of Health Revenues, from Sources to Schemes to Providers to Services to Beneficiaries, Dubai 2014



The share of the prepayment schemes in Dubai, where employers purchase coverage for their employees and their families from the insurance companies, increased between 2012 and 2013 by 3.8% in real terms (nominal increase of 5.1% minus the official inflation rate of 1.3%). This increase was 184 M AED. Between 2013 and 2014, when the Law came into effect, the real share of prepayment schemes increased by 8% in real terms (nominal increase of 12% minus the official inflation rate of 3.37%). This increase was 450 M AED.

The increase in total current expenditures between 2013 and 2014 was 1.32 B AED. The prepayment funds, namely insurance funds, accounted for 34% of that increase: 450 M AED

*Others (Providers) : Retailers (8%) Diagnostic Centers (4%), Governance & administration (4%)

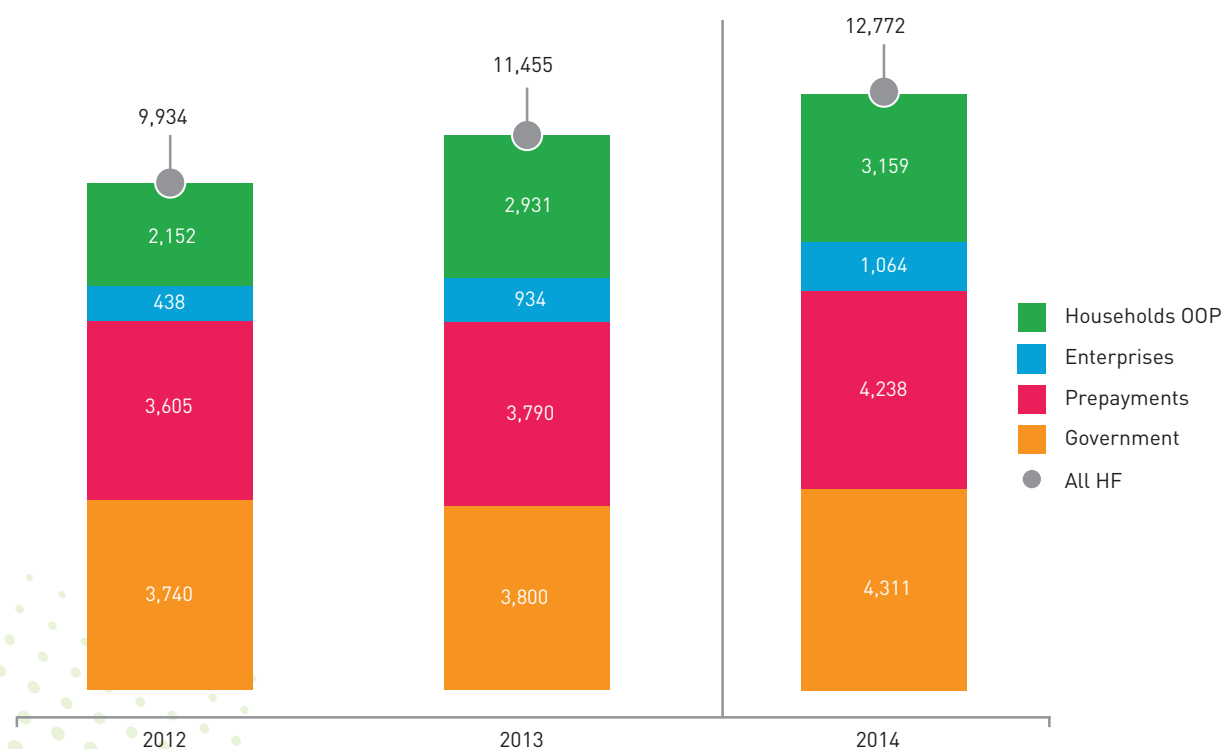
** Others (Services): Rehabilitation (1%), Governance & administration (6%)

3.2 Effect of ISAHD

The HASD data does not show a direct correlation between the implementation of ISAHD and the increase of the healthcare expenditure. This can be explained by two factors. First, the government, financed by the general government budget, is still a major source of the healthcare funds: 33%.

It is expected that the government's share of CHE to reduce gradually in the next few years, because: a. the employers will pay their share in the CHE mandated by ISAHD as a revenue of schemes; and b. the government facilities will collect their revenue for the services provided from the insurance schemes. Second, ISAHD was in the early phases of implementation in 2014. The first phase of implementation, which was the only mandated phase in 2014, requires that corporations with 1,000 employees or above must enroll their employees in ISAHD. The employees from these corporations represent about 25% of the total population of Dubai; and most of these corporations either have coverage for their employees or have a direct arrangement with the healthcare providers in terms of health plans. The data from eClaimLink estimates that the enrollment in ISAHD by end of 2014 was above 50%.

Figure 3 Total Healthcare expenditure by scheme, Dubai 2012 to 2014, Million AED



Nonetheless, the results provide an important insight that ISAHD is implemented at a higher than expected rate of growth, and that the effect of ISAHD on the current health expenditure, HASD, will experience a major increase in the following two phases of implementation: July/2015 (additional 19% of the population), and June/2016 (the remaining population).

HASD cannot find a direct causality between ISAHD and the total Current Health Expenditure (CHE), for two reasons:

- Government funds, financed by the general government budget, play a major share on the CHE: 33%.
- ISAHD mandated health insurance coverage in 2014 for 17% of the population. The main effect of ISHAD will be evident once the universal coverage is achieved in 2016.

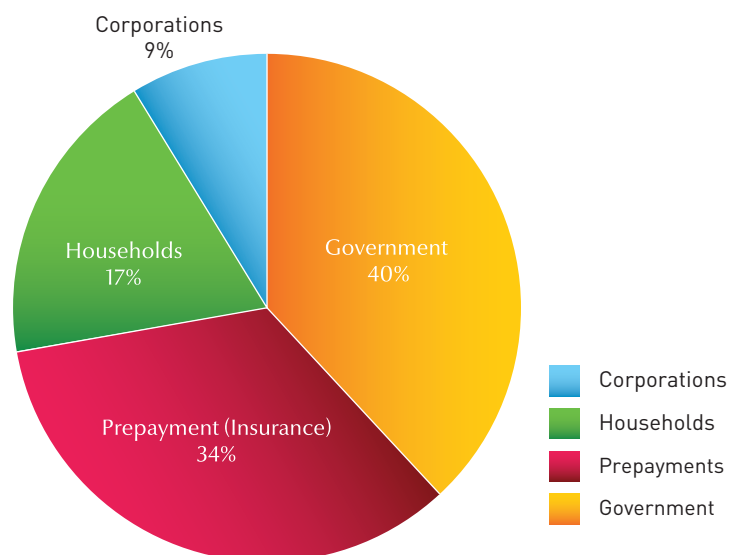
3.3 Main Findings – Detailed Level

3.3.1 Where did the 12,772 M AED (3,478 M US Dollar) come from (Sources of Funds) in 2014?

Table 2 Revenues from Financing Schemes, Dubai 2012-2014 Comparison, Million AED

Revenues of health care financing schemes Million AED		2012	2013	2014
FS.1	Transfers from government domestic revenue (allocated to health purposes)	3,242	3,299	3,816
FS.5	Voluntary prepayment	3,605	3,789	4,238
FS.6	Other domestic revenues n.e.c.	3,088	4,366	4,718
FS.6.1	Other revenues from households n.e.c.	2,152	2,931	3,159
FS.6.2	Other revenues from corporations n.e.c.	936	1,435	1,559
All FS		9,934	11,455	12,772

Figure 4 Share in growth between 2013 and 2014 of total Current Health Expenditure, by source of funds, Dubai



Key Findings

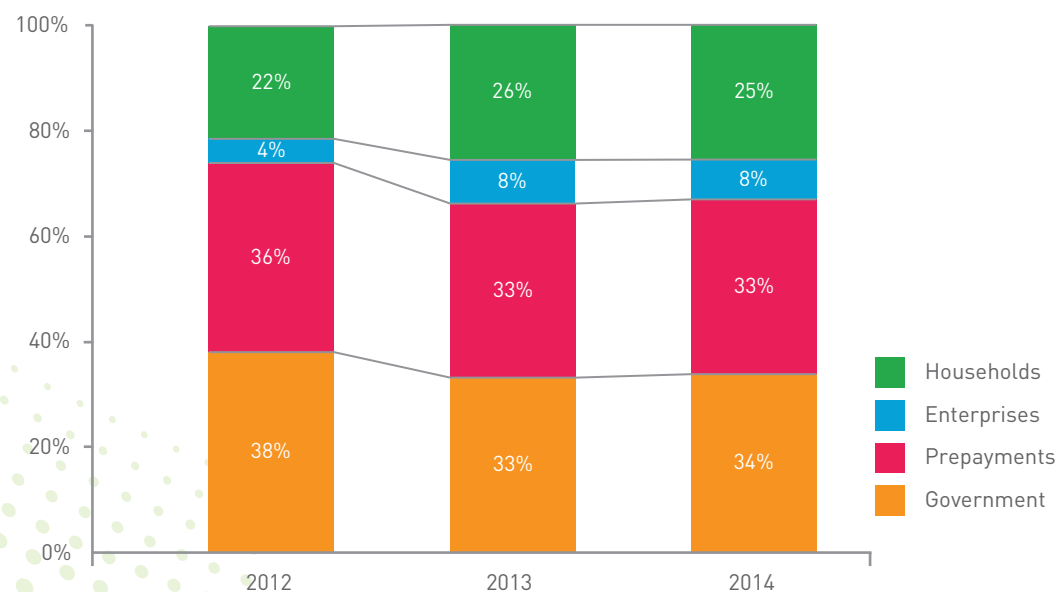
The growth of households and corporations is increased in 2014 at a much lower rate than in 2013. From 2012 to 2013, the households share increased by 36%, versus only 8% between 2013 and 2014. Likewise, corporations' share increased by 53% in 2013, but by only 9% in 2014. The available explanation for this reduction in the growth of these two main sources of revenue is the shift of the funding mechanism caused by ISAHD. As a proof, the health insurance funds increased by 5% in 2013, followed by 12% once the Law was issued. The government sources of funds, however, increased by 2% in 2013 and by 16% in 2014. It is expected that the share of the government will optimize overtime, towards efficient service delivery, as a result of the new payment system in both as a revenue of scheme and as a scheme. The growth of TCE in 2014 was 1,317 M AED, with government accounting for 40% of that increase; the prepayment, or insurance, funds and households accounted for 34% and 17% increase respectively. Corporations accounted for 9% of the growth.

3.3.2 Which schemes pooled the funds for health care between 2012 and 2014?

Table 3 Financing Flows by financing schemes (HF), Dubai 2012-2014, Million AED

Financing schemes, Million AED		2012	2013	2014
HF.1	Government schemes and compulsory contributory health care financing schemes	3,740	3,800	4,311
HF.2	Voluntary health care payment schemes	4,043	4,723	5,302
HF.2.1	Voluntary health insurance schemes	3,605	3,789	4,238
HF.2.3	Enterprise financing schemes	438	934	1064
HF.3	Household out-of-pocket payment	2,152	2,931	3,159
ALL HF		9,934	11,455	12,772

Figure 5 Trend analysis of the financing schemes, Dubai 2014



Key Findings

As with the sources of funds, described with silo effects, the management of these funds, i.e. financing schemes, mirrored the change in proportions. The private sector sources of funds show that the health insurance schemes increased with a higher rate than any other increase in 2014. In specific, the prepayment scheme increases by 5% in 2013 while the increase reached 12% in 2014. In contrast, enterprise financing schemes doubled in 2013, while these increased by only 14% in 2014. The current health expenditure in private sector increased by 808M AED between 2013 and 2014. The voluntary health insurance scheme accounted for 56% of that increase.

The current health expenditure in private sector increased by 808M AED between 2013 and 2014. The voluntary health insurance scheme accounted for 56% of that increase.

3.3.3 Which financing schemes managed the 12,772 M AED (3,478 M US Dollar) in 2014?

Table 4 Revenues from Financing Schemes, Dubai 2012-2014 Comparison, Million AED

Revenues of health care financing schemes		FS.1	FS.5	FS.6	FS.6.1	FS.6.2	All FS	Share of HF
U.A.Emirates dirham (AED), Million		Transfers from government domestic revenue (allocated to health purposes)	Voluntary prepayment	Other domestic revenues n.e.c.	Other revenues from households n.e.c.	Other revenues from corporations n.e.c.		
Financing schemes								
HF.1	Government schemes and compulsory contributory health care financing schemes	3,816		495		495	4,311	34%
	HF.1.1.1 Central government schemes	447					447	3%
	HF.1.1.2 State/regional/local government schemes	3,369		495		495	3,864	30%
HF.2	Voluntary health care payment schemes		4,238	1,064		1,064	5,302	42%
	HF.2.1 Voluntary health insurance schemes		4,238				4,238	33%
	HF.2.3 Enterprise financing schemes			1,064		1,064	1,064	8%
HF.3	Household out-of-pocket payment			3,159		3,159	3,159	25%
All HF		3,816	4,238	4,718	3,159	1,559	12,772	100%
Share of FS		30%	33%	37%	25%	12%	100%	

The result show that the silo flow of healthcare funds is still dominant in the distribution of healthcare funds, even with the Universal Health Coverage. For instance, the government funds for health are mainly managed by government, and the households funds are managed by households. The launch of UHC started in 2014, and the silo flow is expected to diminish gradually with the full implementation.

Key Findings

Current Health Expenditure (CHE) in Dubai for 2014 was 12,772 M AED, which is 11% higher than for 2013, which was 11,455 M AED.

Where do the health funds come from in 2014?

The columns in Table 4 show the answer to this question. It can be summarized as follows:

- The government, Federal and Local, (FS.1) funded the healthcare system in Dubai by 3,816 M (30%)
- Employers (FS.5) and enterprises (FS.6.2) contributed with 5,797 M. Employers paid to insurance companies (HF.2.1) 4,238 M (36%) and the rest of the employers funds was managed by the corporations themselves (12%)
- Households (HF.3) contributed by 3,159 M (25%).

Which schemes pooled these funds in 2014?

The rows in Table 4 show the answer to this question, and can be summarized as follows:

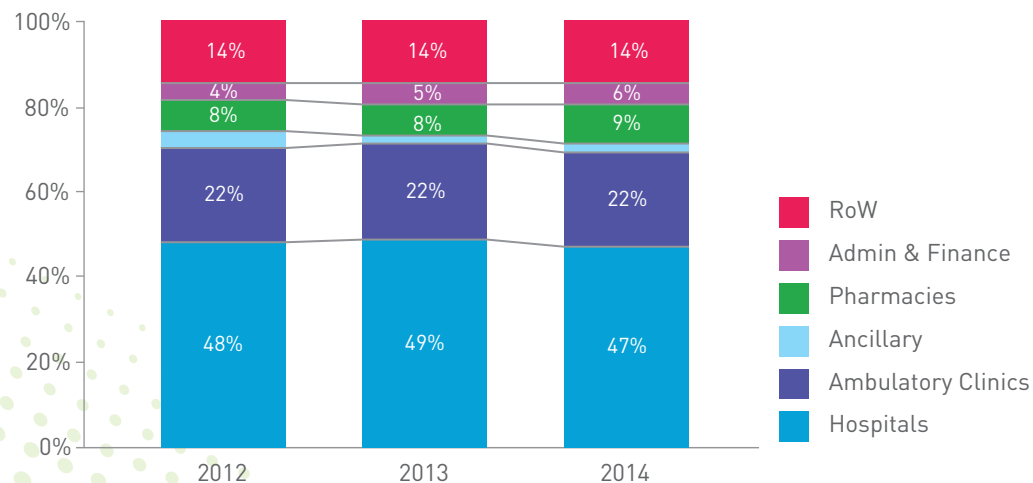
- Government Schemes (HF.1) pooled 3,816 M (34%). The majority, 3,369 or 88% of the government schemes, was pooled by the Dubai government.
- Voluntary schemes (HF.2) pooled 5,302 M (42%).
- Households pooled their own money of 3,159 M (25%).

3.3.4 Which providers received the funds for health care between 2012 and 2014?

Table 5 Financing Flows of health funds by Health Care providers (HP), Dubai 2014 Dubai 2012-2014 Million AED

Health care providers		2012	2013	2014
HP.1	Hospitals	4,756	5,593	5,986
HP.3	Ambulatory Clinics	2,219	2,553	2,852
HP.4	Ancillary Providers	368	190	219
HP.5	Pharmacies	745	868	1,184
HP.7	Administration and financing	379	608	706
HP.7.1	Government health administration agencies	122	114	153
HP.7.3	Private health insurance administration agencies	257	494	553
HP.9	Rest of the world	1,434	1,643	1,826
All HP		9,934	11,455	12,772

Figure 6 Trend analysis of the healthcare providers, Dubai 2014



Key Findings

Hospitals continue to receive the highest share of total health care expenditure, around 50%. In terms of economic significance, hospitals constitute the major growth over the three years period. The health care amounts received by hospitals in 2013 increased from 2012 by 18% (4,756 M to 5,593 M), while increasing by only 7% in 2014 (5,593 M to 5,986). Subsequently the health care amounts received by ambulatory clinics in 2013 increased from 2012 by 15% (2,219 M to 2,553 M), while it increased again by 12% in 2014 (2,553 M to 2,852 M).

Whether this decline in the growth of hospital expenditure between 2013 and 2014 and increase of growth in ambulatory clinics expenditure is a sign of a new era where care is shifted from hospitals to primary care, remains to be observed further over subsequent years.

3.3.5 Health schemes and Providers that received the 12.8 Billion AED (3.45 B US Dollar) (HFXHP)

Table 6 Financing Flows from Financing Schemes by Health Care Providers (HF X HP), Dubai 2014 Million AED

Revenues of health care financing schemes		HF.1	HF.2	HF.3	All FS	Share of HF
U.A.Emirates dirham (AED), Million		Government schemes and compulsory contributory health care financing schemes	Voluntary health care payment schemes	Household out-of-pocket payment		
Financing schemes						
HP.1	Hospitals	2,296	2,592	1,097	5,986	47%
HP.3	Providers of ambulatory health care	1,127	972	752	2,852	22%
HP.4	Providers of ancillary services	202	15	1	216	2%
HP.5	Retailers and Other providers of medical goods		750	433	1,184	9%
HP.7	Providers of health care system administration and financing	152	553	2	706	9%
HP.9	Rest of the world	534	419	874	1,826	14%
All HP		4,311	5,302	3,159	12,772	100%
Share of HF		34%	42%	25%	100%	

Key Findings

Where did the health funds go?

The rows in Table 6 show the answer to this question and can be summarized as follows:

- Hospitals (HP.1) received the lion's share of funds in 2014, at 5,986 M AED (47%).
- Clinics and polyclinics (HP.3) received the second largest share of funds, 2,852 M (22%).
- Ambulance, medical and diagnostic labs, and imaging centres (HP.4) received only 219 M (2%).
- Pharmacies (HP.5) received 1,184 M (9%)
- Health governance (HP.7), providers of health care system administration and financing, received 706 M (6%) of the funds.
- A significant share of the health funds paid for health services that were delivered outside Dubai (HP.9), 1,826 M (14%).

Figure 7 CHE by Financing Schemes and Providers, Dubai 2014

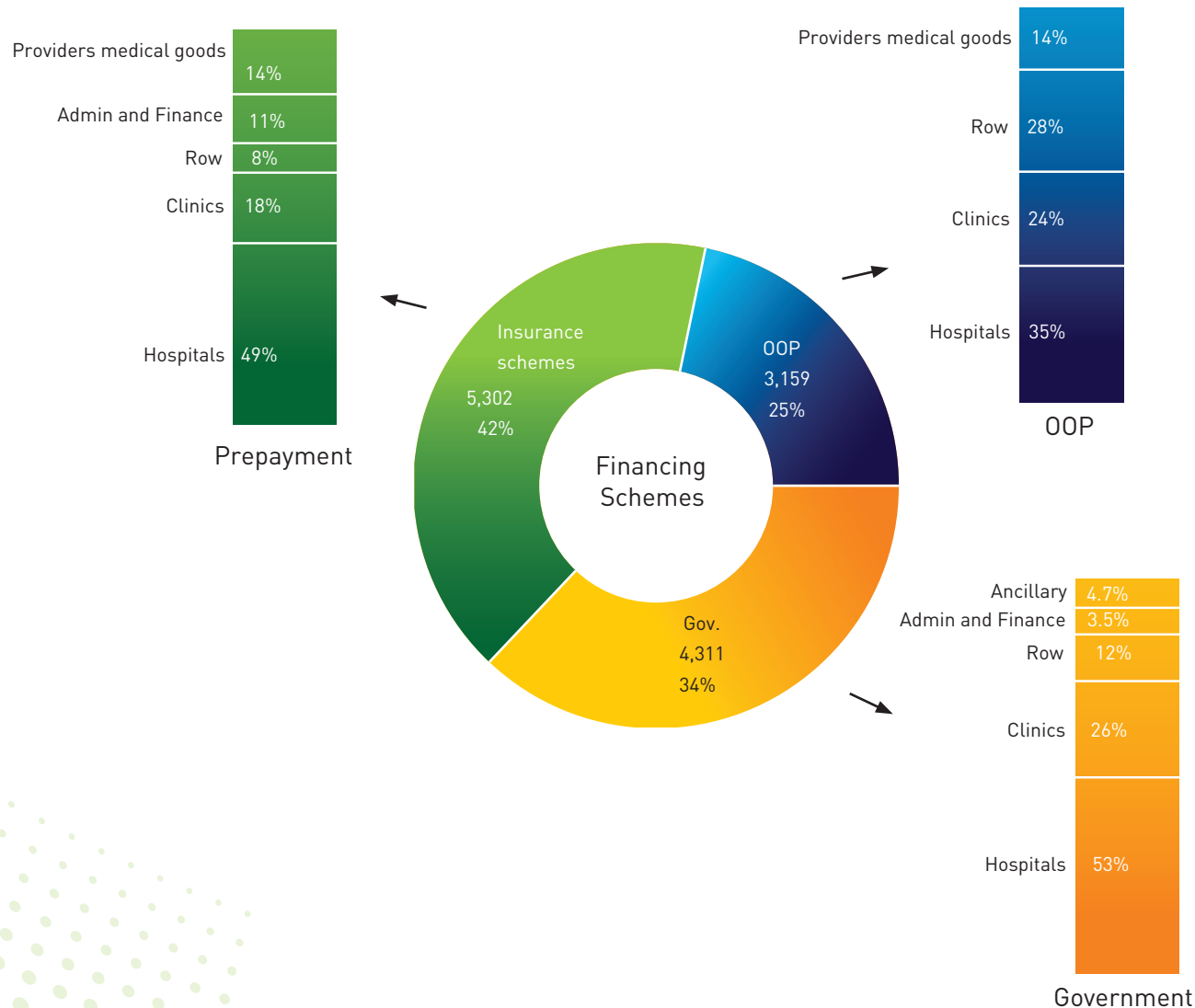


Figure 7 further illustrates the flow of health funds between the schemes and the providers of services. Both government and insurance schemes spent around half of their funds on hospitals, 53% and 49%, respectively. Households, however, spent much less on hospitals, i.e. 35%. Government and households are similar in their share of expenditure on ambulatory clinics, 26% and 24% respectively. However, insurance schemes spent only 18% on clinics. The highest expenditure on the rest of the world is from the households, 28%, followed by government, 12%, and insurance schemes, 8%.

The distribution of health funds between schemes and providers in 2014 is similar largely to the one found in 2013.

3.3.6 Which health services delivered for the health funds between 2012 and 2014?

Table 7 Financing Flows of All Financing Schemes by Health Care functions (HFXHC), Dubai 2012-2014 Million AED

Health care functions		2012	2013	2014
HC.1	Curative care	5,505	6,820	7,524
HC.1.1	Inpatient curative care	2,981	3,043	3,457
HC.1.2	Day curative care	232	318	341
HC.1.3	Outpatient curative care	2,292	3,458	3,726
HC.2	Rehabilitative care	52	65	74
HC.4	Ancillary services (non-specified by function)	1,398	1,734	1,958
HC.4.1	Laboratory services	812	984	1,110
HC.4.2	Imaging services	435	574	647
HC.4.3	Patient transportation	151	175	202
HC.5	Medical goods (non-specified by function)	2,002	1,584	1,805
HC.6	Preventive care	550	634	584
HC.7	Governance, and health system and financing administration	377	607	704
HC.7.1	Governance and Health system administration	116	107	143
HC.7.2	Administration of health financing	261	500	561
HC.9	Other health care services not elsewhere classified (n.e.c.)	49	7	122
ALL HP		9,934	11,455	12,772

Key Findings

Similar to previous years and as expected, Curative care (HC.1) at 7,524 M AED in 2014 comprises the bulk of CHE (59%), and a significant increase of 10% from 2013. The share at 2014 of the Ancillary services (HC.4) at 1,958 M AED and the Medical goods (HC.5) at 1,808 M AED contributed another 14% and 13% respectively, of the total CHE. The Governance and Financing Administration (HC.7) of the Healthcare system in Dubai contributed with %. Preventive care (HC.6), similar

to the previous years, contributed only a fraction of the health expenditure at 5%.

The variance among the years is attributable to the methodological differences explained above. Nonetheless, the noticeable differences in the trend are found in the Curative care (HC.1) and Ancillary services (HC.4) at 24% higher in 2013, and only 10% higher in 2014.

3.3.7 Which Services delivered for the 12,772 M AED (3,478 M US Dollar)?

Table 8 Financing Flows of Financing Schemes by Health Care functions (HFXHC), Dubai 2014 Million AED

Financing schemes		HF.1			HF.2	HF.3			All HF	Share of HC
		Government schemes and compulsory contributory health care financing scheme	Central government schemes	State/regional/local government schemes	Voluntary health care payment schemes	Voluntary health insurance schemes	Enterprise financing schemes	Household out-of-pocket payment		
Health care functions		U.A.Emirates dirham (AED), Million								
HC.1	Curative care	2,808	160	2,648	2,907	2,255	651	1,810	7,524	59%
HC.1.1	Inpatient curative care	1,935	42	1,894	1,069	830	240	453	3,457	27%
HC.1.2	Day curative care	38		38	77	60	17	225	341	3%
HC.1.3	Outpatient curative care	834	118	716	1,760	1,366	394	1,132	3,726	29%
HC.2	Rehabilitative care	57		57				17	74	1%
HC.3	Long-term care (health)	1		1					1	0%
HC.4	Ancillary services (non-specified by function)	369	51	318	971	753	217	618	1,958	15%
HC.4.1	Laboratory services	60	37	22	607	471	136	443	1,110	9%
HC.4.2	Imaging services	108	14	94	364	282	81	175	647	5%
HC.4.3	Patient transportation	202		202					202	2%
HC.5	Medical goods (non-specified by function)	355	105	250	872	676	195	578	1,805	14%
HC.6	Preventive care	453		453	0	0	0	131	584	5%
HC.7	Governance, and health system and financing administration	152	15	137	553	553			704	6%
HC.7.1	Governance and Health system administration	143	15	128					143	1%
HC.7.2	Administration of health financing	9		9	553	553			561	4%
HC.9	Other health care services not elsewhere classified (n.e.c.)	116	116	0	0	0	0	6	122	1%
All HC		4,311	447	3,864	5,302	4,238	1,064	3,159	12,772	100%
Share of HP		34%	3%	30%	42%	33%	8%	25%	100%	

Key Findings

Where did the health funds go?

The rows in Table 8 show the answer to this question and can be summarized as follows:

- Curative care (HC.1) received the biggest share of funds in 2014, at 7,524 M AED (59%).
- Ancillary services (HC.4), which were found to be significantly higher in Dubai compared to OECD countries, received 1,958 (15%)
- Medical goods (HC.5) received a similar amount to that of the Ancillary services at 1,805 M AED (14%)
- Administration of health financing (HC.7.2), which can be found mainly in the loading factor and reinsurance, represented 553 M AED (4%).

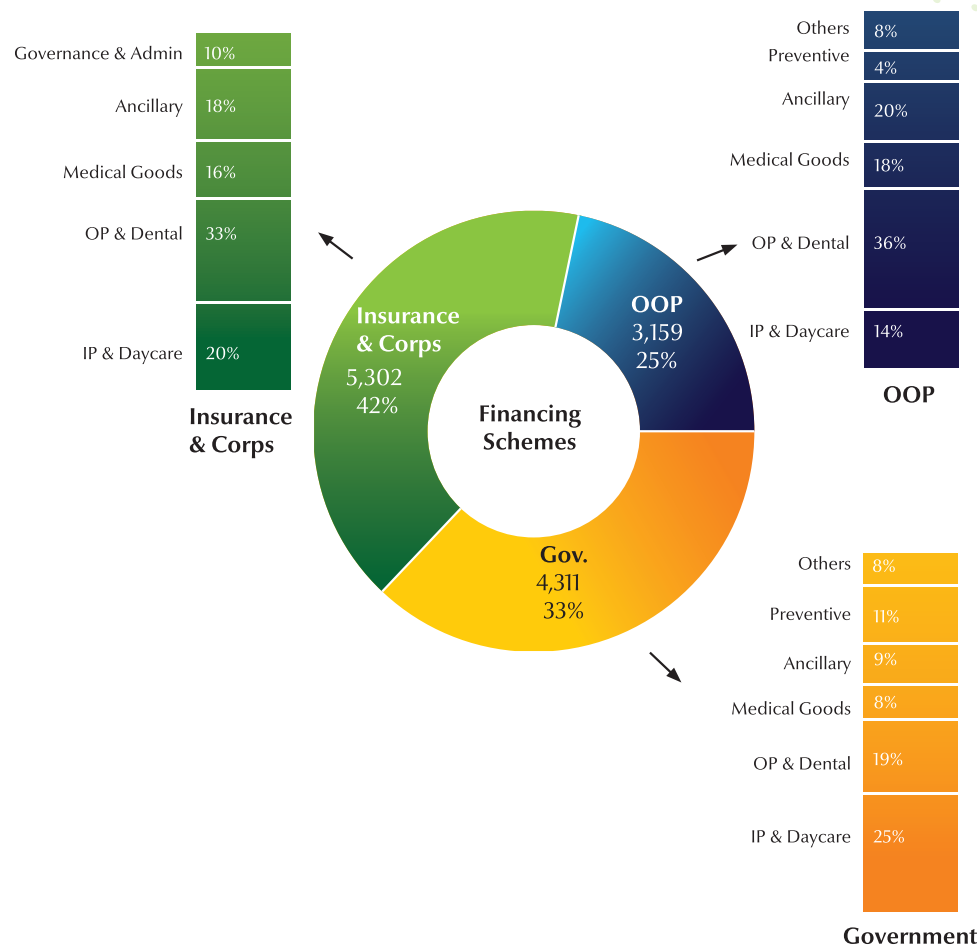
The administration and financing expenditures are expected to rise at a faster rate, with the implementation of ISAH, in absolute terms. However, this measure should be monitored closely to ensure efficiency via economies of scales.

Figure 8 further illustrates the flow of health funds between the funding schemes and the healthcare functions.

The Figures illustrates a clear distinction between the government and the other expenditures on the health care functions.

The high expenditure of the government funds on hospitals above can be explained in Figure 8 by the high expenditure on inpatient care (46%) compared to the other two schemes: insurance schemes (20%) and households (14%). For these two schemes, insurance and households, expenditure on medical goods is relatively similar, 18% and 16% respectively. However, the government scheme spent a third of that percentage on medical goods, only 6%.

Figure 8 Financing Flows from Financing Schemes and Health Care Function, Dubai 2014



3.3.8 Which providers produced which services for the 12,772 M AED (3,478 M US Dollar) (HPXHC)?

Table 9 Financing Flows from Health Care Providers by Health Care Functions (HCXHP), Dubai 2014 Million AED

Health care functions		Health care providers									All HP	Share of HC
		HP.1 Hospitals	HP.3 Providers of ambulatory health care	HP.4 Providers of ancillary services	HP.5 Retailers and Other providers of medical goods	HP.7 care system administration and financing	HP.7.1 Government health administration agencies	HP.7.3 Private health insurance administration agencies	HP.9 Rest of the world			
U.A.Emirates dirham (AED), Million												
HC.1	Curative care	4,877	1,369						1,278	7,524	59%	
HC.1.1	Inpatient curative care	2,801							656	3,457	27%	
HC.1.2	Day curative care	233	7						100	341	3%	
HC.1.3	Outpatient curative care	1,843	1,361						522	3,726	29%	
HC.2	Rehabilitative care	69							5	74	1%	
HC.4	Ancillary services (non-specified by function)	814	640	219					286	1,958	15%	
HC.4.1	Laboratory services	449	452	8					201	1,110	9%	
HC.4.2	Imaging services	365	188	9					85	647	5%	
HC.4.3	Patient transportation			202						202	2%	
HC.5	Medical goods (non-specified by function)	225	140		1,184				256	1,805	14%	
HC.5.1	Pharmaceuticals and other medical non-durable goods	211	132		1,043				162	1,547	12%	
HC.5.2	Therapeutic appliances and other medical goods		0		141				0	141	1%	
HC.5.2nec	Unspecified medical goods (n.e.c.)	14	9						94	117	1%	
HC.6	Preventive care	0	583						1	584	5%	
HC.7	Governance, and health system and financing administration					704	152	553		704	6%	
HC.7.1	Governance and Health system administration					143	143			143	1%	
HC.7.2	Administration of health financing					561	9	553		561	4%	
HC.9	Other health care services not elsewhere classified (n.e.c.)	1	119			2	2		0	122	1%	
All HC		5,986	2,852	219	1,184	706	153	553	1,826	12,772	100%	
Share of HP		47%	22%	2%	9%	6%	1%	4%	14%	100%		

Table 9 shows the distribution of healthcare functions across healthcare providers, and can be summarized as follows:

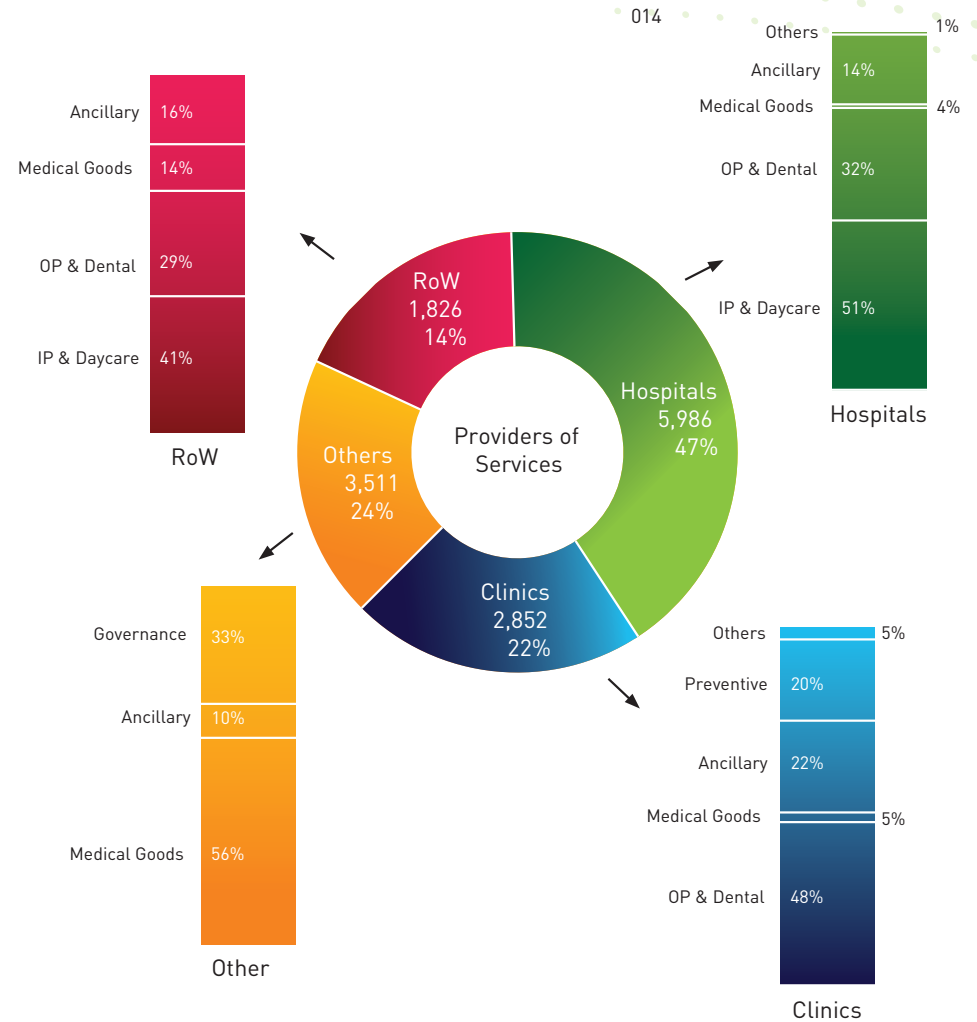
- Hospitals: of the total 5,986 M received by hospitals, 4,877 M was spent on curative care, 814 M for ancillary services, 225 M for medical goods, and 70 M for other services. - The share of hospitals (HP.1) of the outpatient services (HC.1.3) is considerably higher in Dubai.
- Clinics and polyclinics: of the total 2,852 M received, 1,369 M was for Curative care, 640 M for ancillary, 140 M for medical goods, and 583 M for preventive care.
- The RoW provided a wide array of services totaling 1,826 M. The majority of preventive care was provided in ambulatory settings (583 M out of 584 M).

Figure 9 further illustrates the flow of health funds between the providers of services and the healthcare functions. As it was found previously using eClaimLink data, which captures the health insurance payments to the private sector, the share of ancillary services in Dubai is significantly higher. Figure 9 joins all the sources of funds from eClaimlink, government, and households. The sources of funds combined confirm the higher relatively use of ancillary services in the outpatient setting in Dubai. Overall, the ancillary services account for 15% of the healthcare funds spent on outpatients. The rate varies by provider, with hospitals at 14%, clinics at 23%, and the rest of the world at 16%.

Further analysis and regulations must be established to ensure that the money spent on ancillary services is used at the most efficient and effective way.

In addition, the share of funds for clinics in the figure was still relatively small in 2014 at 22%, with no change noticed from 2012. Both hospitals and clinics compete for available funds between hospitals and clinics for primary care services. For instance, outpatient care represented 29% of the total CHE. The share that the hospitals received for outpatient at 32% was similar to that of the clinics at 48%.

Figure 9 CHE by Health Care Providers and Health Care Functions, Dubai 2014



3.4 Comparative Analysis

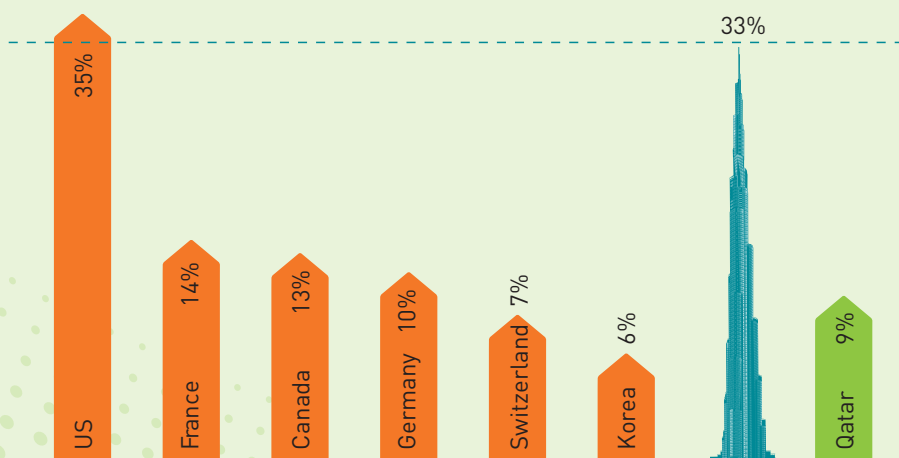
This Section shows the results of Dubai compared to Qatar and selected countries from the Organization of Economic Cooperation and Development (OECD). Data from Qatar provide the closest regional comparison to Dubai's Healthcare system given that Qatar's insurance structure and population distribution is similar to that of Dubai. In addition, Qatar is the only GCC country that has produced National

Health Accounts for the past five years. SHA 2011 is institutionalized in OECD and the data is produced regularly. This group of healthcare systems were chosen to create a basket of countries that are similar to the current or future health financing system in Dubai. These health systems are in the USA, France, Canada, Germany, Switzerland, and Korea.

Prepayment Share

Figure 10 shows that Healthcare funds managed by prepayment schemes, insurance companies, is comparatively higher in Dubai at 33% than either Qatar at 8.9% or most OECD benchmarked countries. This share is expected to increase further with ISAHD. Internationally, only US is higher than Dubai, however, it must be noted that these health systems have different health financing arrangements, based on tax collection and social healthcare system.

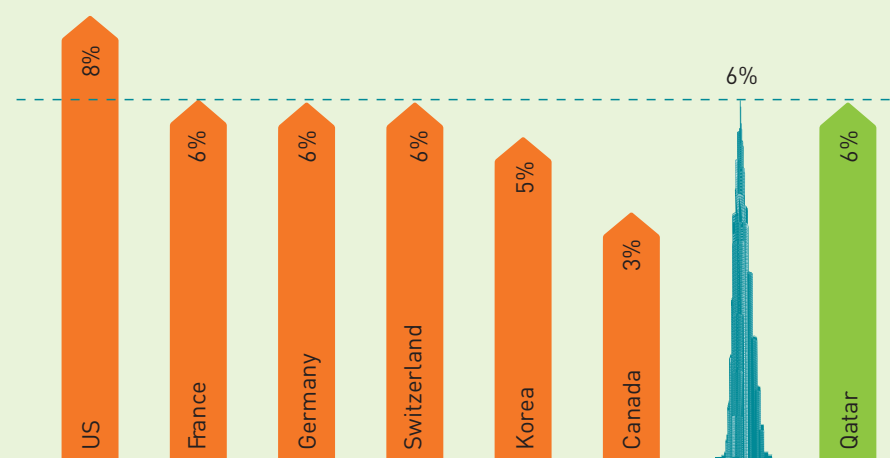
Figure 10 Comparison of Private Insurance Share from CHE between Dubai, 2014 and Selected Countries, 2013



Administration and Finance Share

Figure 11 shows the health expenditure on administration and finance in Dubai, at 6%, is similar to Qatar and benchmarked OECD countries. With ISAHD model, which is based on pooling of health funds managed by private companies, this expenditure should be monitored closely to ensure sustainability of these companies but within international range.

Figure 11 Comparison of Health administration and finance share from CHE between Dubai, 2014, and Selected Countries, 2013

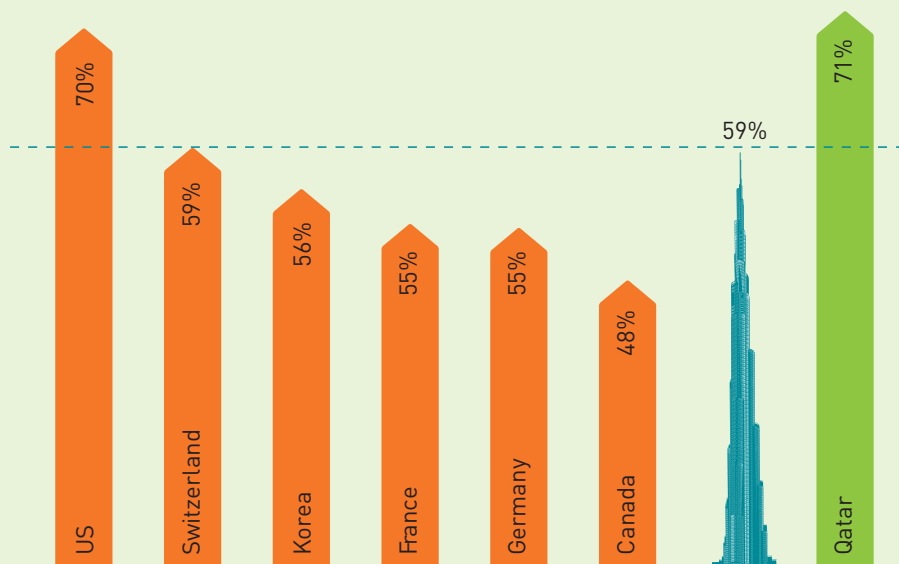




Curative care share

Figure 12 shows that Dubai's spent on curative care was 59% of CHE, similar to that of Switzerland (59%). The healthcare spent on curative care by US and Qatar is comparatively much higher at 70% and 71% respectively

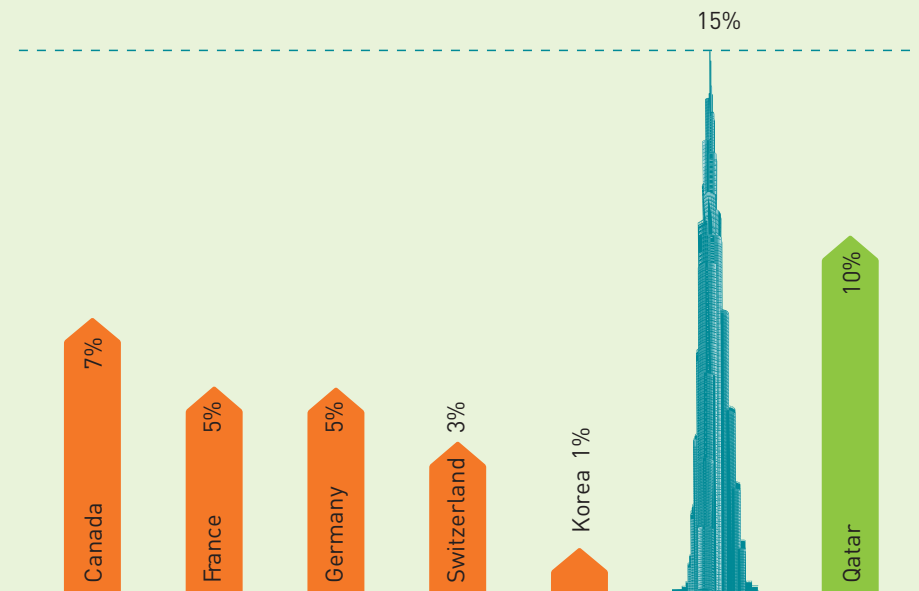
Figure 12 Comparison of Curative care share from CHE between Dubai, 2014 and Selected Countries 2013



Ancillary services share

Figure 13 shows that 15% of the CHE was spent of Ancillary services which is much higher than Qatar and OECD benchmark countries.

Figure 13 Comparison of Ancillary Services share from CHE between Dubai, 2014, elected countries, 2013





MARKETPLACE INSIGHTS

4.1 Who can benefit from the overall results?

Government

With the implementation of ISAHD starting 2014, it is imperative to monitor the flow of funds between the different sources, going to different schemes. Two findings are the first to highlight: growth of Current Health Expenditure **growth** rates, and the **decrease** in the share of the government as a source of health funds. It is expected that the current health expenditure to continue to increase at a steady rate, which was 11% between 2013 and 2014. The government share of health funds is expected to decrease, with an equivalent, or higher, increase in the rate of funds from employers and households.

Figure 14 Growth of total current health expenditure, population and insured population, Dubai 2012 to 2014 actual, and 2015 to 2016 predicted

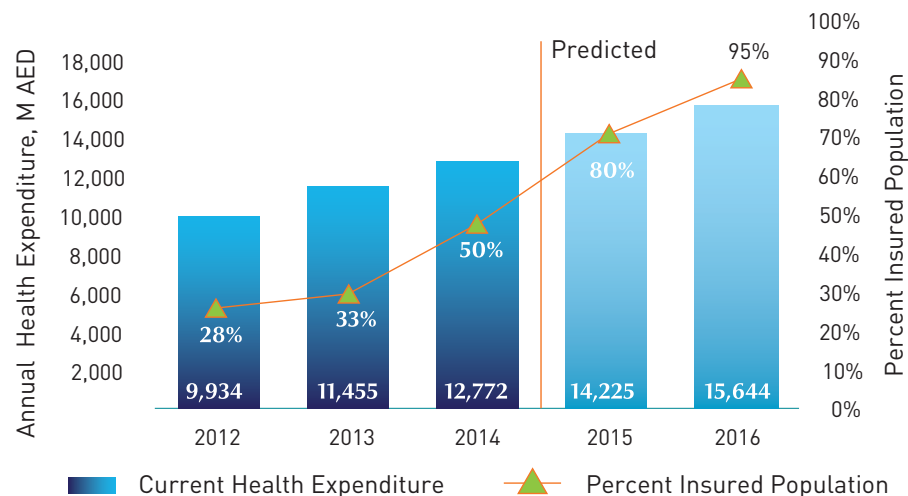


Figure 14 below shows the actual growth for the years 2012 to 2014, of the total health expenditure, total population, and the insured population. The figure also shows the expected growth for the years 2015 and 2016. By 2016, the UHC will reach its peak.

Providers

The providers can benefit from the overall results of this report, in particular the overall expected health expenditure once the UHC is achieved in 2016 and beyond.

Health insurance companies, and TPAs

The share of the insurance funds from the current health expenditure is 33%. This share is expected to increase because of a shift from two main schemes: Government, which is currently 30% and will reduce significantly in the next 3 to 5 years to a share of less than 20%. The second shift to the insurance scheme will come from households, which is currently at 25%. The shift in the share of the households as a financing scheme will also reduce to the current cost sharing from the current health insurance schemes, i.e. 315 M AED from 4,235 M AED, which is translated to 7%.

4.2 Who can benefit from the Schemes b y Providers results, and how?

Government

The findings of HASD will assist the planning of the healthcare providers based on prediction models using the current data to predict future behaviors and investments

Providers

Using a hypothetical model in this section gives an example of the

use of HASD for the relationship between the providers and funding schemes.

Hypothetical Hospital A1C received total revenue of 500 M AED in 2014, and the actual breakdown by the source of funds is shown in the figure below in column IV. Hypothetical Hospital A1C can benefit from HASD by comparing the ratio of the received revenues to the average market (Points a. and b.), and can also compare the share of the hospital, A1C, to the healthcare market in Dubai (Point e.):

Table 10 Hypothetical model of a hospital using 2014 HASD's findings, Dubai 2014

I. Source of funds	II. Market average source of funds for a hospital*	III. Average Share: Typical Hospital**	IV. Actual Share: Hospital A1C	Findings Explained
Insurance companies and TPAs	70%	350 M AED [70%]	290 M AED [58%]	a. Hospital A1C revenue from insurance companies and TPAs (290 M AED) is 60 M AED less than an average hospital in Dubai.
Household out-of-pocket	30%	150 M AED [30%]	210 M AED [42%]	b. Hospital A1C revenue from OOP (210 M AED) is 60 M AED higher than an average hospital in Dubai.
	100%		500 M AED [13.6%]	c. The annual revenue of 500 M AED in 2014 for this hospital is about 13.6% of the total market share of the hospitals (3,690 M AED, excluding the Government hospitals).

* **Note:** Includes only the shares of the private hospitals in Dubai, and excludes the share of the government hospitals and those outside Dubai.

** Average share of a Typical Hospital is computed using Hospital A1C total revenue and applying the market average to it. Results do not include the revenue from medical tourism.

*** All numbers mentioned in Table 10 above are hypothetical, and are shown to illustrate how can a typical hospital in Dubai can benefit from HASD's findings.

It must be noted that these hypothetical models neither account for the hospital size, nor for the specialty of the hospital.

Health insurance companies, and TPAs

Insurance company, **Claims**, paid in total 200 M AED for claims in 2014, and the breakdown by the providers who received these payments are shown in the table below in column IV. The health insurance company,

Claims, can benefit from HASD by comparing the ratio of the paid claims to the average market (a., b., c. and d.), and the share of the insurance company, **Claim**, to the healthcare market in Dubai (e.):

Table 11 Hypothetical model of a health insurance company using 2014 HASD's findings, Dubai 2014

I. Source of funds	II. Market average source of funds for a hospital**	III. Average Share: Typical Company*	IV. Actual Share: Claims Insurance Company	Findings Explained
Payment to Hospitals	55%	109 M AED [55%]	130 M AED [65%]	a. The amount that Claims paid to hospitals (130 M AED) is 21 M AED higher than an average insurance company in Dubai.
Payment to Clinics	20%	41 M AED [20%]	30 M AED [15%]	b. The amount that Claims paid to clinics (30 M AED) is 11 M AED less than an average insurance company in Dubai.
Payment to Pharmacies	16%	32 M AED [16%]	20 M AED [10%]	c. The amount that Claims paid to pharmacies (20 M AED) is 12 M AED less than an average insurance company in Dubai.
Payments to RoW	9%	18 M AED [9%]	20 M AED [10%]	d. The amount that Claims paid claims to RoW (20 M AED) is just 2 M AED more than an average insurance company in Dubai.
	100%		200 M AED [4.2%]	e. The annual paid claims of 200 M AED in 2014 for this insurance company, Claims, is about 4.2% of the total market's share of the paid claims (4,749 M AED, excluding the administration expenditures).

* Typical insurance company of a similar total paid claims (200 M AED) and applying the market average ratios.

** **Note:** Includes only the payments to healthcare services delivered inside or outside Dubai, and excludes the share of administration and profit.

*** All numbers mentioned in Table 11 above are hypothetical, and are shown to illustrate how can a typical insurance company in Dubai can benefit from HASD's findings. It must be noted that these hypothetical models neither account for the insurance company's number of insured population, nor for the type of coverage it provides.

4.3 Who can benefit from the Services by Providers results, and how?

Government

The results from HCXHP can be used by the regulator in Dubai to predict service change in the future. For example, payments to inpatient services increased by 10% between 2013 and 2014; these are translated in 500 M AED. The expected total CHE in 2016 can be calculated using these growth levels between 2013 and 2014, with a margin of error. Using the same growth rate between 2013 and 2014, the total CHE for inpatient services in 2016, holding all matters constant, will be 3,457 M AED with an annual growth of 10% for two years; i.e. 4,183 M AED. The regulator can then use these estimates

to promote investments in Dubai by designing planning strategies to inform current and future investors.

Providers

Clinics

Hypothetical Policlinic **CBC**, received total revenue of 100 M AED in 2014, and the breakdown by the type of service delivered is shown in the figure below in column IV. Policlinic **CBC** can benefit from HASD by comparing the ratio of the received revenues by service delivered to the average market (a. to c.), and the share of the Policlinic **CBC**, to the healthcare market in Dubai (d.). Thus, making business decisions and plans based on evidence from the local market:

Table 12 Hypothetical model of a policlinic using 2014 HASD's findings, Dubai 2014

I. Destination of funds	II. Market average of services delivered by a policlinic *	III. Average Share: Typical Policlinic**	IV. Actual Share: Policlinic CBC	Findings Explained
Outpatient curative care	48%	48 M AED [48%]	65 M AED [65%]	a. This Policlinic's revenue from outpatient curative care (65 M AED) is 17 M AED (17 percentage points) higher than the average policlinic in Dubai.
Ancillary service	23%	23 M AED [23%]	26 M AED [26%]	b. This Policlinic's revenue from ancillary services (26 M AED) is 3 M AED higher than the average policlinic in Dubai.
Medical goods, including medicines	4%	4 M AED [4%]	1 M AED [1%]	c. This policlinic's revenue from medical goods and drugs (1 M AED) is 3 M AED less than an average policlinic in Dubai
Preventive Care	21%	21 M AED [21%]	8 M AED [8%]	d. This policlinic's revenue from preventive care (8 M AED) is 13 M AED less than an average policlinic in Dubai. Negotiations must be arranged with the health insurance companies to enroll in their preventive care coverage.
			100 M AED [3.5%]	e. The annual revenue of 100 M AED in 2014 for this Policlinic is about 5.8% of the total market share of the Policlinics (2,852 M AED, excluding the Government PHCs of 1,127).

* Note: Includes only the shares of the private Policlinics in Dubai, and excludes the share of the government PHC and those outside Dubai.

** Typical Hospital using the current policlinics' total revenue and applying the market average.

***All numbers mentioned in Table 10 above are hypothetical, and are shown to illustrate how can a typical Polyclinic in Dubai can benefit from HASD's findings.

It must be noted that these hypothetical models neither account for the Polyclinic size, nor for the specialties in the Polyclinic

Hospitals

The Hypothetical Hospital **A1C**, received a total revenue of 500 M AED in 2014, and the breakdown by the type of service delivered is shown in the figure below in column IV. Hospital **A1C** can benefit from HASD by comparing the ratio of the received revenues by service delivered to

the average market (a. to e), and the share of the hospital **A1C** to the healthcare market in Dubai (f.). Thus, making business decisions and plans based on evidence from the local market:

Table 13 Hypothetical model of a hospital using 2014 HASD's findings, Dubai 2014

I. Destination of funds	II. Market average of services delivered for hospitals **	III. Average Share: Typical Company*	IV. Actual Share: Hospital A1C	Findings Explained
Inpatient curative care	47%	235 M AED [47%]	200 M AED [40%]	a. This hospital's revenue from inpatient care (200 M AED) is 35 M AED less than the average hospitals in Dubai.
Day curative care	3%	17 M AED [3%]	60 M AED [12%]	b. This hospital's revenue from day curative care (60 M AED) is 43 M AED (9 percentage points) higher than the average hospitals in Dubai. The policy of this hospital to shift from inpatient to day care is showing clear success.
Outpatient curative care	32%	160 M AED [32%]	170 M AED [34%]	c. This hospital's revenue from outpatient care (170 M AED) is 10 M AED higher than the average hospitals in Dubai.
Ancillary service	14%	70 M AED [14%]	52 M AED [10%]	d. This hospital's revenue from ancillary services (52 M AED) is 18 M AED less than the average hospitals in Dubai.
Medical goods, including medicines	2%	11 M AED [2%]	18 M AED [4%]	e. This hospital's revenue from medical goods and drugs (18 M AED) is 7 M AED higher than the average hospitals in Dubai, which could be caused by the policy to shift to more daycare services.
			500 M AED [13.6%]	f. The annual revenue of 500 M AED in 2014 for this hospital is about 13.6% of the total market share of the hospitals (3,690 M AED, excluding the Government hospitals).

* **Note:** Includes only the shares of the private hospitals in Dubai, and excludes the share of the government hospitals and those outside Dubai.

** Typical Hospital using the current hospital's total revenue and applying the market average.

*** All numbers mentioned in Table 10 above are hypothetical, and are shown to illustrate how can a typical hospital in Dubai can benefit from HASD's findings.

It must be noted that these hypothetical models neither account for the hospital size, nor for the specialty of the hospital.

Health insurance companies, and TPAs

The hypothetical insurance company **Claims**, paid claims in a total of 200 M AED in 2014, and the breakdown by the services ,what was paid by insurance company for different type of services is shown in the

Figure below in column IV. The health insurance company **Claims** can benefit from HASD by comparing the ratio of the paid claims to the average market (Points a., b., c. d and e.)

Table 14 Hypothetical model of a health insurance company using 2014 HASD's findings, Dubai 2014

I. Source of funds	II. Market average source of funds for a hospital**	III. Average Share: Typical Company*	IV. Actual Share: Claims Insurance Company	Findings Explained
Inpatient and Day curative care	21%	42 M AED [21%]	30 M AED [15%]	a. This company's paid claims to inpatient care (30 M AED) is 12 M AED less than an average insurance company.
Outpatient curative care	32%	64 M AED [32%]	70 M AED [35%]	b. This company's paid claims to outpatient care (70 M AED) is 6 M AED higher than average insurance company in Dubai.
Ancillary service	18%	36 M AED [18%]	40 M AED [20%]	c. This company's paid claims to ancillary service (40 M AED) is 4 M AED higher than average insurance company in Dubai.
Medical goods, including medicines	16%	32 M AED [16%]	30 M AED [15%]	d. This company's paid claims to medical goods (30 M AED) is just 2 M AED less than average insurance company in Dubai.
Governance and Health Administration	13%	26 M AED [13%]	30 M AED [15%]	e. This company's paid Governance and Health Administration (30 M AED) is 4 M AED more than average insurance company in Dubai.
	100%		200 M AED	

* **Note:** Includes only the payments to healthcare services delivered inside or outside Dubai, and excludes the share of administration and profit.

** Typical insurance company of a similar total paid claims (200 M AED) and applying the market average ratios.

*** All numbers mentioned in Table 11 above are hypothetical, and are shown to illustrate how can a typical insurance company in Dubai can benefit from HASD's findings.

It must be noted that these hypothetical models neither account for the insurance company's number of insured population or for the type of coverage it provides



Restructure Medicare & Medicaid

Could Save Up to ~60% of Cost, per Kaiser Family Foundation

Restructure Medicare & Medicaid

State	Year	Cost
Alabama	2010	1.5
Alabama	2011	1.5
Alabama	2012	1.5
Alabama	2013	1.5
Alabama	2014	1.5
Alabama	2015	1.5
Alabama	2016	1.5
Alabama	2017	1.5
Alabama	2018	1.5
Alabama	2019	1.5
Alabama	2020	1.5
Alabama	2021	1.5
Alabama	2022	1.5
Alabama	2023	1.5
Alabama	2024	1.5
Alabama	2025	1.5
Alabama	2026	1.5
Alabama	2027	1.5
Alabama	2028	1.5
Alabama	2029	1.5
Alabama	2030	1.5
Alabama	2031	1.5
Alabama	2032	1.5
Alabama	2033	1.5
Alabama	2034	1.5
Alabama	2035	1.5
Alabama	2036	1.5
Alabama	2037	1.5
Alabama	2038	1.5
Alabama	2039	1.5
Alabama	2040	1.5
Alabama	2041	1.5
Alabama	2042	1.5
Alabama	2043	1.5
Alabama	2044	1.5
Alabama	2045	1.5
Alabama	2046	1.5
Alabama	2047	1.5
Alabama	2048	1.5
Alabama	2049	1.5
Alabama	2050	1.5

State	Year	Cost
Alabama	2010	1.5
Alabama	2011	1.5
Alabama	2012	1.5
Alabama	2013	1.5
Alabama	2014	1.5
Alabama	2015	1.5
Alabama	2016	1.5
Alabama	2017	1.5
Alabama	2018	1.5
Alabama	2019	1.5
Alabama	2020	1.5
Alabama	2021	1.5
Alabama	2022	1.5
Alabama	2023	1.5
Alabama	2024	1.5
Alabama	2025	1.5
Alabama	2026	1.5
Alabama	2027	1.5
Alabama	2028	1.5
Alabama	2029	1.5
Alabama	2030	1.5
Alabama	2031	1.5
Alabama	2032	1.5
Alabama	2033	1.5
Alabama	2034	1.5
Alabama	2035	1.5
Alabama	2036	1.5
Alabama	2037	1.5
Alabama	2038	1.5
Alabama	2039	1.5
Alabama	2040	1.5
Alabama	2041	1.5
Alabama	2042	1.5
Alabama	2043	1.5
Alabama	2044	1.5
Alabama	2045	1.5
Alabama	2046	1.5
Alabama	2047	1.5
Alabama	2048	1.5
Alabama	2049	1.5
Alabama	2050	1.5

State	Year	Cost
Alabama	2010	1.5
Alabama	2011	1.5
Alabama	2012	1.5
Alabama	2013	1.5
Alabama	2014	1.5
Alabama	2015	1.5
Alabama	2016	1.5
Alabama	2017	1.5
Alabama	2018	1.5
Alabama	2019	1.5
Alabama	2020	1.5
Alabama	2021	1.5
Alabama	2022	1.5
Alabama	2023	1.5
Alabama	2024	1.5
Alabama	2025	1.5
Alabama	2026	1.5
Alabama	2027	1.5
Alabama	2028	1.5
Alabama	2029	1.5
Alabama	2030	1.5
Alabama	2031	1.5
Alabama	2032	1.5
Alabama	2033	1.5
Alabama	2034	1.5
Alabama	2035	1.5
Alabama	2036	1.5
Alabama	2037	1.5
Alabama	2038	1.5
Alabama	2039	1.5
Alabama	2040	1.5
Alabama	2041	1.5
Alabama	2042	1.5
Alabama	2043	1.5
Alabama	2044	1.5
Alabama	2045	1.5
Alabama	2046	1.5
Alabama	2047	1.5
Alabama	2048	1.5
Alabama	2049	1.5
Alabama	2050	1.5

ACRONYMS & DEFINITIONS

Acronyms

AED	United Arab Emirates Dirham	FP	Factors of Provision
CHE	Current Health Expenditure	FS	Revenues of Financing Scheme
DED	Dubai Department of Economic Development	GCC	Gulf Co-operation Countries
DHA	Dubai Health Authority	GDP	Gross Domestic Product
DHCC	Dubai Healthcare City	GGEH	General Government Expenditure on Health
DM	Dubai Municipality	HASD	Health Accounts System of Dubai
DoF	Dubai Department of Finance	HC	Healthcare Functions
DSC	Dubai Statistics Center		

Term	Definition	Term	Definition
Ancillary services	A variety of services such as laboratory tests, diagnostic imaging and patient transport, usually performed by paramedical or medical technical personnel with or without the direct supervision of a medical doctor.	Day care	Planned medical and paramedical services delivered to patients who have been formally admitted for diagnosis, treatment or other types of health care but with the intention to discharge the patient on the same day.
Capital formation (investment)	Investment in health care facilities and equipment that creates assets that are typically used over a long period of time.	Exports (of health care goods and services)	Health care goods and services acquired by non-residents (visitors) from resident providers.
Curative care	Medical and paramedical services delivered during an episode of curative care. An episode of curative care occurs when the principal medical intent is to: relieve the symptoms of injury or illness; to reduce severity of an illness or injury; or to protect against injury or exacerbation of an injury which could threaten life or normal function.	Factors of provision (FP)	The types of inputs used to produce goods and services consumed or activities conducted in the health accounts boundary.
Current and capital health expenditure	Expenditure that arises out of the addition of investment expenditures to current health expenditures (CHE + investment).	Financing agents (FA)	Institutional units that manage health finance schemes. For example, collecting revenues and premiums, purchase services, and pay for these services.
Current health expenditure (CHE)	Comprises all services such as curative care (including services provided to residents by non-residents providers), rehabilitative care, prevention, public health, and ancillary health care. Also includes expenditures for administration of these services and drugs, medical goods, and salaries and fees of health personnel. This excludes investment expenditures, and exports (services provided to non-residents).	Financing schemes (HF)	Components of a country's health financial system that channel revenues to pay for, or purchase, the activities within the health accounts boundary.
		Health care functions (HC)	The goods and services provided and activities performed within the health accounts boundary.
		Health care providers (HP)	Entities that receive money in exchange for or in anticipation of activities inside the health accounts boundary.

HE	Health Expenditures	n.e.c	Not elsewhere classified	PHI	Private Health Insurance
HF	Financing Schemes	NCU	National Currency Unit	PvHE	Private Expenditure on Health
HFD	Health Funding Department (DHA)	HAPT	Health Accounts Production Tool	RoW	Rest of the World
HP	Healthcare Providers	OECD	Organization for Economic Co-operation & Development	SHA	System of Health Accounts
IP	Inpatient Services	OOP	Out-of-Pocket	THE	Total Health Expenditures
ISAHD	Insurance system for advancing healthcare in Dubai	OP	Out-Patient Services	UAE	United Arab Emirates
MHI	Mandatory Health Insurance	OST	Overseas Treatment	US\$	United States Dollars
MoH	Ministry of Health – Dubai Medical District	PHC	Primary Healthcare Centers	WHO	World Health Organization

Term	Definition	Term	Definition
Health care system administration and financing	Establishments that are primarily engaged in the regulation of the activities of agencies that provide health care and in the overall administration of the health care sector, including the administration of health financing.	Preventive services	Services provided as having the primary purpose of risk avoidance, of acquiring diseases or suffering injuries, which can frequently involve a direct and active interaction of the consumer with the health care system.
Imports of healthcare goods and services (Imports)	Health care goods and services acquired by residents from non-resident providers. In other words, healthcare services provided outside the geographical boundaries of the health care system.	Providers (HP)	Encompass organizations and actors that deliver health care goods and services as their primary activity, as well as those for which health care provision is only one among a number of activities.
Inpatient care (IP)	Formal admission into a health care facility for treatment and/or care that is expected to constitute an overnight stay	Revenues of financing schemes (FS)	The revenues of the health financing schemes received or collected through specific contribution mechanisms.
Not Elsewhere Classified (nec)	A category used to reflect those activities or transactions that fall within the boundaries of the health accounts but which cannot be definitively allocated to a specific category due to insufficient documentation.	System of Health Accounts (SHA) 2011	A system developed by the OECD, Eurostat, and WHO to provide international comparability standards for member and non-member countries. The manual was produced in 2011.
Out-Of-Pocket (OOP) spending	The direct outlays of households, including gratuities and payments in-kind, made to health practitioners and suppliers of pharmaceuticals, therapeutic appliances, and other goods and services whose primary intent is to contribute to the restoration or enhancement of the health status of individuals or population groups. Includes household payments to public services, non-profit institutions or non-governmental organizations.	Total health expenditure (THE)	Total health expenditure is no longer part of the health accounts as per SHA 2011. It is defined as the sum of current health expenditure (CHE) and the expenditure on capital goods. In this report, the term is used only to draw comparison with other countries.
Outpatient care (OP)	Any care offered to a non-admitted patient regardless of where it occurs except the patient's place of residence. It may be delivered in a hospital, an ambulatory care center, or a physician's private office.	Voluntary prepayment schemes	Schemes that receive payments from the insurer or other institutional units on behalf of the insured, to secure entitlement to benefits of voluntary health insurance schemes.